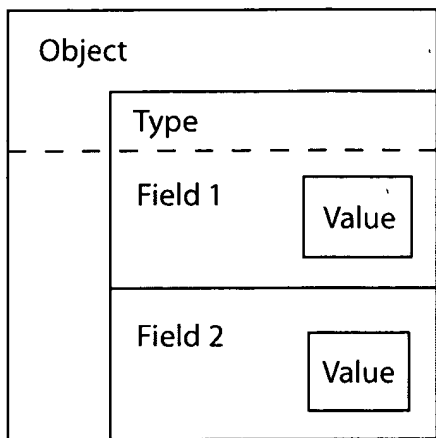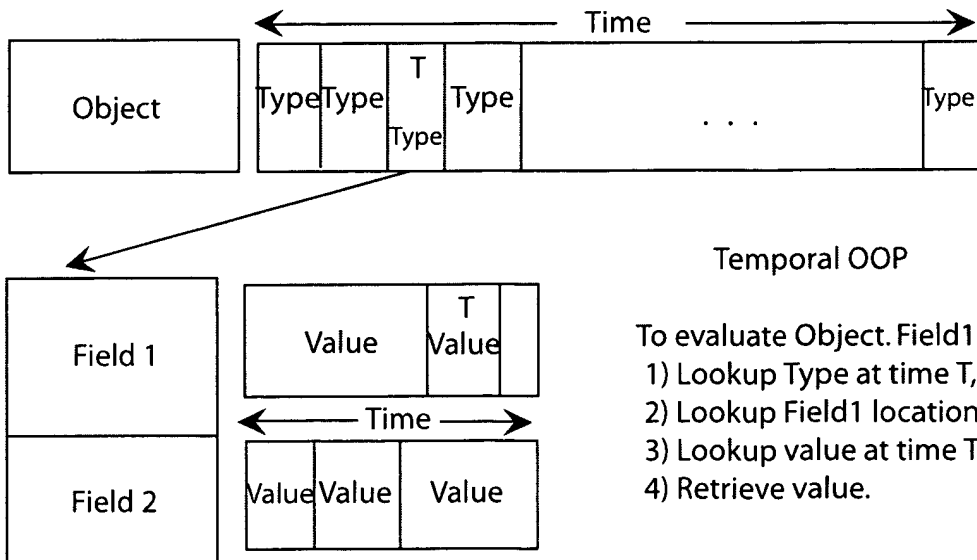# FIG. 1

Object Oriented Runtime Comparison

OOP

To evaluate Object. Field1:
1) Lookup static type,
2) Lookup static Field1 location
3) Retrieve value.

FIG. 2

Temporal OOP

To evaluate Object. Field1:
1) Lookup Type at time T,
2) Lookup Field1 location,
3) Lookup value at time T,
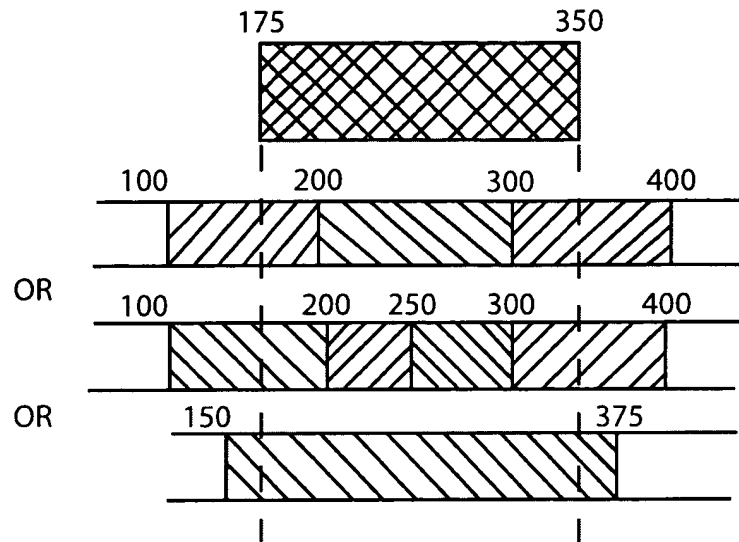4) Retrieve value.

FIG. 3
GENERAL ERROR CONDITIONS

OR

OR

FIG. 4
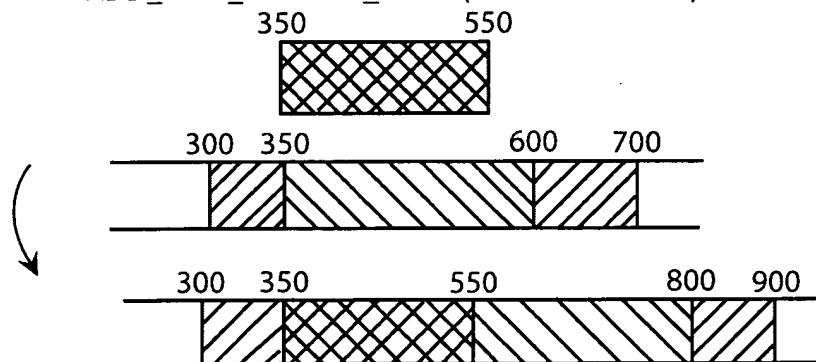## ADD_NEW_ATTRVAL_SHIFT (ONE END-POINT)

FIG. 5
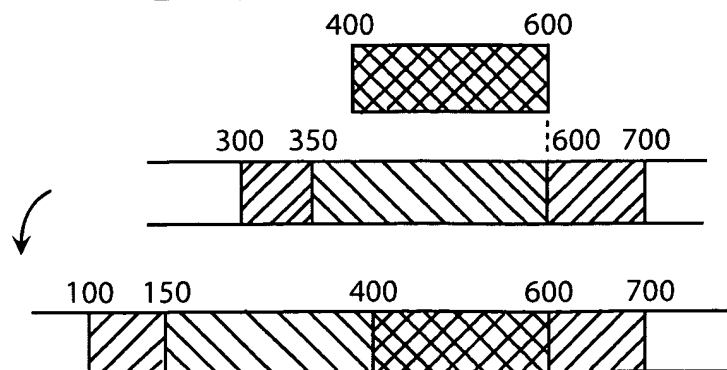## ADD_NEW_ATTRVAL_SHIFT (ONE END-POINT)

FIG. 6

ADD_NEW_ATTRVAL_SHIFT (TWO END-POINTS)
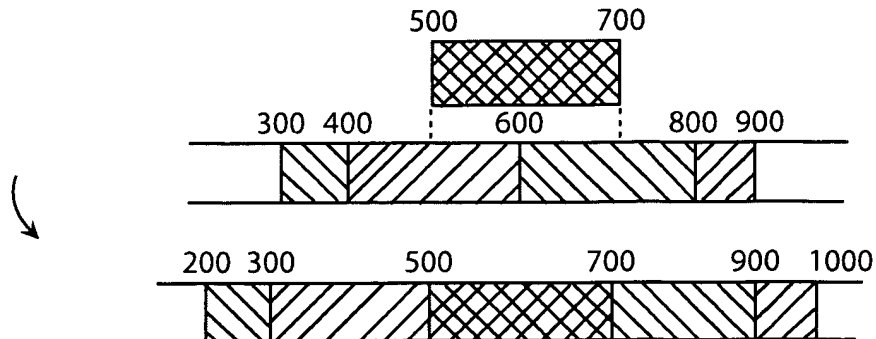
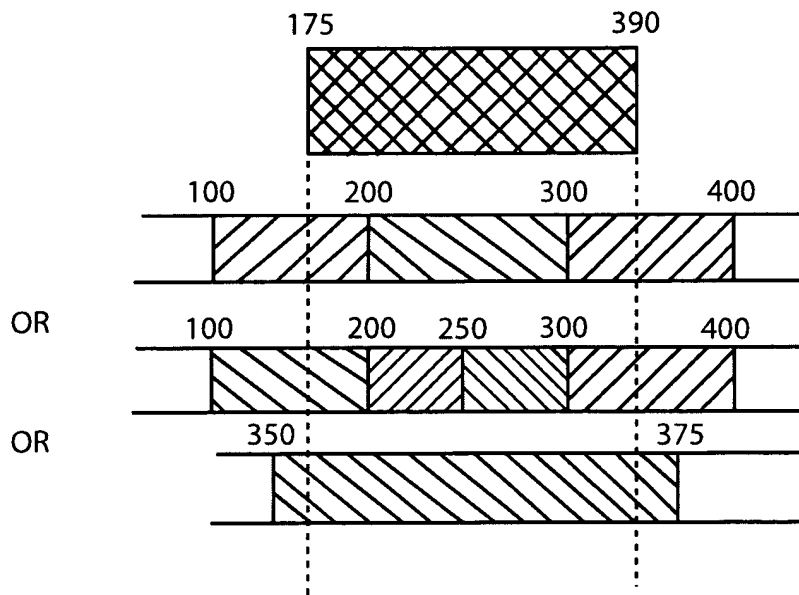# FIG. 7

GENERAL ERROR CONDITIONS

OR

OR

FIG. 8

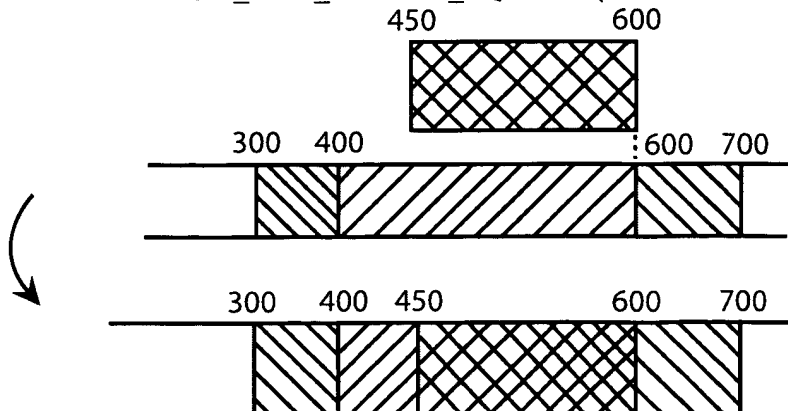ADD_NEW_ATTRVAL_SQUEEZE (ONE END-POINT)

FIG. 9

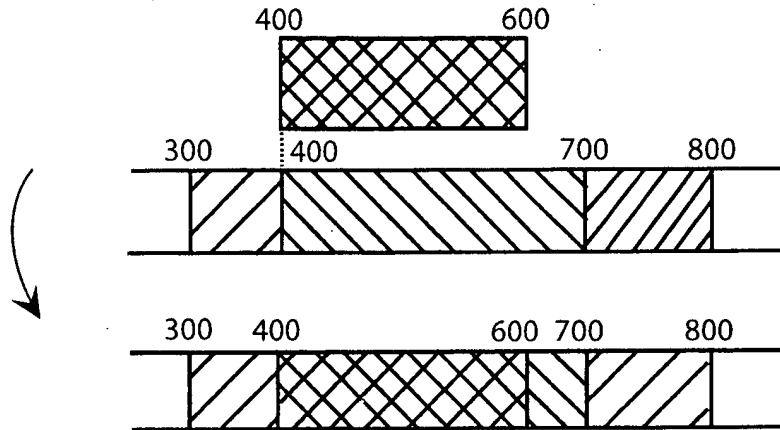## ADD_NEW_ATTRVAL_SHIFT (ONE END-POINT)
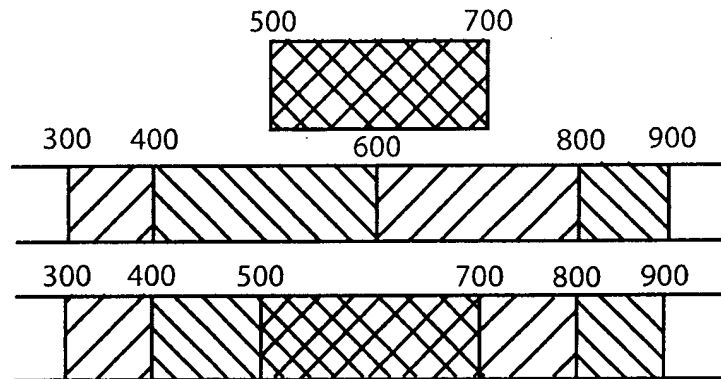

FIG. 10

ADD_NEW_ATTRVAL_SQUEEZE (TWO END-POINTS)
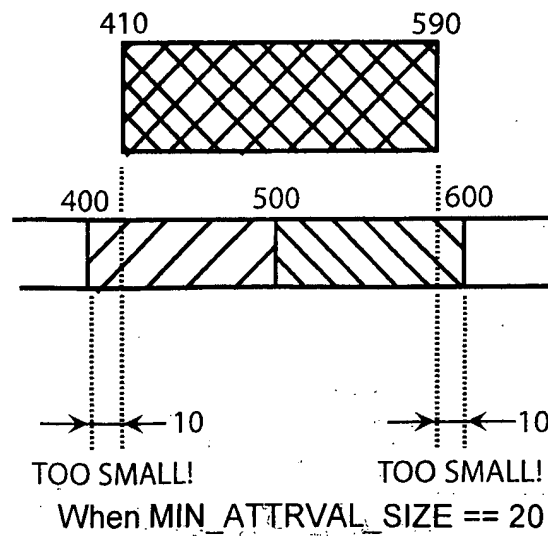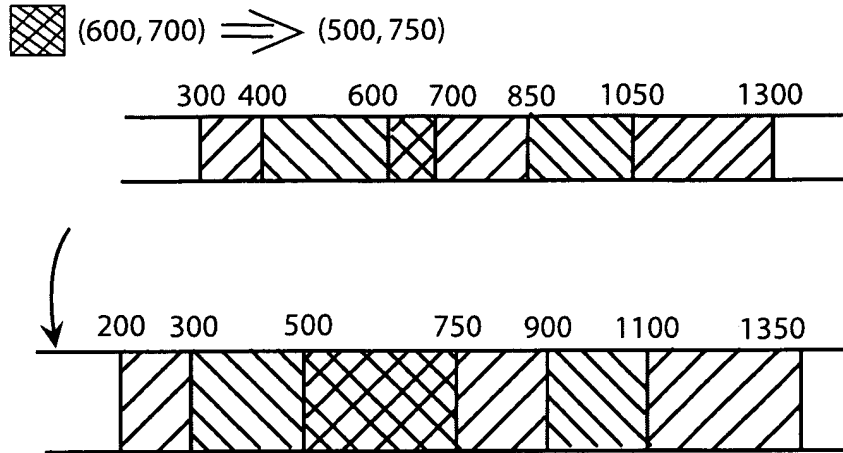
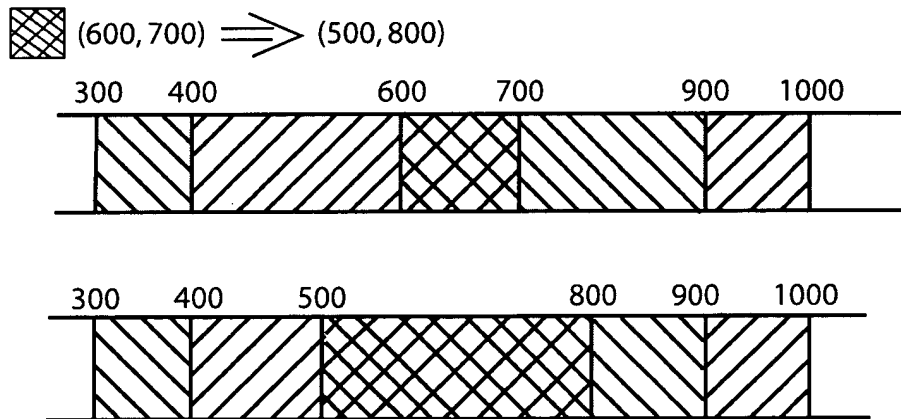

FIG. 11

ERROR CONDITION-ADD_NEW_ATTRVAL_SQUEEZE

TOO SMALL!   TOO SMALL!

When MIN_ATTRVAL_SIZE == 20

FIG. 12

FINAL_EDIT_ATTRVAL_SHIFT

⊠ (600, 700) ⟹ (500, 750)

FIG. 13

VFINAL_EDIT_ATTRVAL_SQUEEZE

⊠ (600, 700) ⟹ (500, 800)

FIG. 14

ERROR CONDITION-FINAL_EDIT_ATTRVAL_SQUEEZE
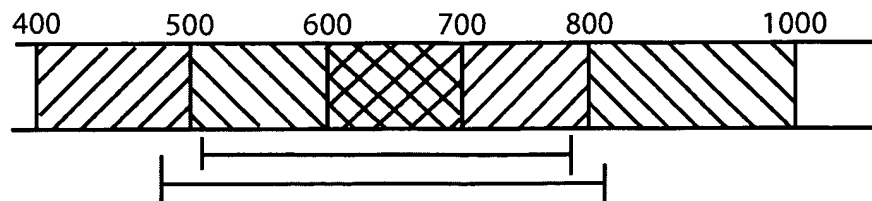
⊠ (600, 700) ⟹ (510, 790)   NEIGHBORS BECOME TOO SMALL

⊠ (600, 700) ⟹ (490, 810)   NEIGHBORS' BOUNDARIES EXCEEDED
                              BY NEW ATTRVAL FROM/TO RANGE

When MIN_ATTRVAL_SIZE ==20 (for example)
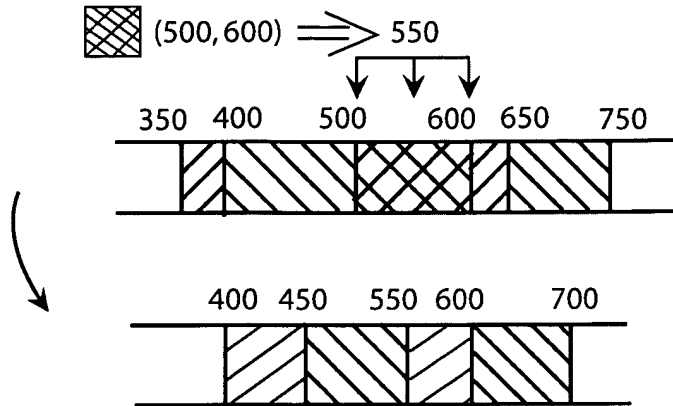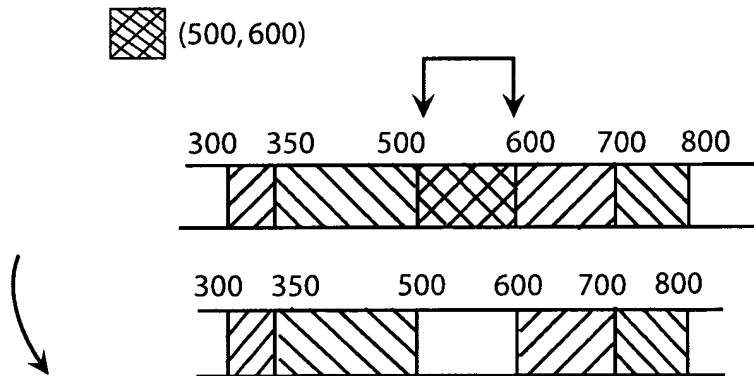
FIG. 15

FINAL_REMOVAL_ATTRVAL_SHIFT

FIG. 16

FINAL_REMOVAL_ATTRVAL_LEAVE_GAP

FIG. 17

FINAL_REMOVAL_ATTRVAL_FILL